

AMENDMENTS TO THE CLAIMS:

The following listing of claims replaces all prior listings, and all prior versions, of claims in the above-identified application.

LISTING OF CLAIMS:

1. (Currently amended) A fuel cell having at least one unit comprising a first separator in which a fuel gas passage section is formed, a first seal sheet which seals the first separator periphery, a fuel gas diffusion layer, an anode, a polymer electrolyte, a cathode, an oxidizing gas diffusion layer, a second seal sheet which seals a second separator periphery and second separator in which an oxidizing gas passage section is formed, in this order, wherein the fuel gas passage section and oxidizing gas passage section are in communication with a fuel gasthe manifold in the first separator and an oxidizing gas manifold in the second separator, respectively, a comb teeth structure, having comb teeth, is provided between the fuel gas passage section and fuel gas manifold and another comb teeth structure, having comb teeth, is provided between the oxidizing gas passage section and the oxidizing gas manifold, slit spaces are formed between the comb teeth so as in such a way to be in communication with the fuel gas and oxidizing gas diffusion layerslayer, and the fuel gas manifold in the first separator is in communication with the fuel gas passage section via the slit spaces between comb teeth of the comb teeth structure, and the oxidizing gas manifold in the second separator is in communication with the oxidizing gas passage section via the slit spaces between comb teeth of the another comb teeth structure, wherein the fuel gas diffusion layer and the oxidizing gas diffusion layer are of a porous material, and at least one of (a) the comb teeth structure is part of the fuel gas diffusion layer and (b) the another comb teeth structure is part of the oxidizing gas diffusion layer.

2. (Currently amended) The fuel cell according to Claim 1, wherein the periphery around each of said first and second ~~separator~~separator, on which said seal sheet is placed, is 1 mm thick or less.

3. (Currently amended) The fuel cell according to Claim 1, wherein said comb teeth structure and said another comb teeth structure are positioned on the extension of the convexes in the fuel gas and oxidizing gas passage sections ~~respectively~~section of each of said first and second separator.

4. (Currently amended) The fuel cell according to Claim 1, wherein said slit spaces ~~between~~in said comb teeth of at least one of said comb teeth structure and said another comb teeth structure are arranged at a pitch of 0.8 to 2.5 mm.

5. (Currently amended) The fuel cell according to Claim 1, wherein thickness of at least one of said fuel gas diffusion layer and said oxidizing gas diffusion layer, having said comb teeth structure, is set at 0.2 to 0.4 mm.

6. (Currently amended) The fuel cell according to Claim 1, wherein void fraction of at least one of said fuel gas diffusion layer and said oxidizing gas diffusion layer, having said comb teeth structure, is set at 50 to 90% when no load is applied.

7. (Currently amended) The fuel cell according to Claim 1, wherein said comb teeth structure is formed on each of two sides of the fuel gas diffusion layer opposite to~~facing~~ each other.

8. (Currently amended) A fuel cell having two or more stacked units each comprising a first separator in which a fuel gas passage section is formed, first seal sheet which seals the first separator periphery, fuel gas diffusion layer, membrane electrode assembly, second seal sheet which seals a second separator periphery and second separator in which an oxidizing gas diffusion layer and oxidizing gas passage section are formed, in this order, wherein the fuel gas passage section and oxidizing gas passage section are in communication with a fuel gasthe manifold in the first separator and an oxidizing gas manifold in the second separator, respectively, a comb teeth structure, having comb teeth, is provided between the fuel gas passage section and fuel gas manifold and another comb teeth structure, having comb teeth, is provided between the oxidizing gas passage section and the oxidizing gas manifold so in such a way that the comb teeth structureeach is attached to at least one of the sides of the fuel gas diffusion layer on the membrane electrode assembly to form a monolithic structure, and the another comb teeth structure is attached to at least one of the sides of the oxidizing gas diffusion layer to form a monolithic structure, and slit spaces are formed between the comb teeth so as in such a way to connect the fuel gas manifold to the fuel gas passage section and the oxidizing gasether manifold to the oxidizing gas passage section, wherein the fuel gas diffusion layer and the oxidizing gas diffusion layer are of a porous material, and at least one of (a) the comb teeth structure is a part of the fuel gas diffusion layer and (b) the another comb teeth structure is part of the oxidizing gas diffusion layer.

9. (Currently amended) The fuel cell according to Claim 8, wherein the periphery around each of said first and second ~~separators~~separator, on which said ~~first and second~~ seal ~~sheets respectively are~~sheet is placed, is 1 mm thick or less.

10. (Currently amended) The fuel cell according to Claim 8, wherein said comb teeth structure ~~and said another comb teeth structure are~~is positioned ~~respectively on extension~~the extension of the convexes in the ~~fuel~~ gas passage section ~~and the oxidizing gas passage section respectively of each of said first and second~~ ~~separators~~separator.

11. (Currently amended) The fuel cell according to Claim 8, wherein said slit spaces ~~between~~in said comb teeth ~~of at least one of the comb teeth structure and the another comb teeth structure~~ are arranged at a pitch of 0.8 to 2.5 mm.

12. (Currently amended) A separator structure comprising a separator in which a gas manifold and gas passage section are formed, ~~a~~ seal sheet which seals the separator periphery, ~~and a~~ gas diffusion layer which is placed ~~so as in such a way~~ to come into contact with the seal sheet, ~~and a comb teeth structure, having comb teeth, provided on the gas diffusion layer, wherein the gas manifold and the diffusion layer are~~can be in communication with each other via slit spaces ~~between the comb teeth in thea comb teeth structure, and wherein the diffusion layer is of a porous material and the comb teeth structure is part of the diffusion layer~~formed to be connected to the diffusion layer.

13. (Currently amended) The separator structure according to Claim 12, wherein said periphery, on which said seal sheet is placed, is ~~preferably~~ 1 mm thick or less.

14. (Currently amended) The separator structure according to Claim 12, wherein said comb teeth structure is positioned on anthe extension of said gas passage section.

15. (Currently amended) The separator structure according to Claim 12, wherein said slit spaces betweenin said comb teeth are arranged at a pitch of 0.8 to 2.5 mm.

16. (Original) The separator structure according to Claim 12, wherein void fraction of said diffusion layer having said comb teeth structure is set at 50 to 90% when no load is applied.

17. (New) The fuel cell according to Claim 1, wherein the comb teeth structure is a part of the fuel gas diffusion layer and the another comb teeth structure is a part of the oxidizing gas diffusion layer.

18. (New) The fuel cell according to Claim 4, wherein said slit spaces between said comb teeth of each of said comb teeth structure and said another comb teeth structure are arranged at a pitch of 0.8 to 2.5 mm.

19. (New) The fuel cell according to Claim 5, wherein a thickness of each of said fuel gas diffusion layer and said oxidizing gas diffusion layer is set at 0.2 to 0.4 mm.
20. (New) The fuel cell according to Claim 6, wherein the void fraction of each of the fuel gas diffusion layer and the oxidizing gas diffusion layer is set at 50 to 90% when no load is applied.
21. (New) The fuel cell according to Claim 1, wherein said another comb teeth structure is formed on each of two sides of the oxidizing gas diffusion layer opposite each other.
22. (New) The fuel cell according to Claim 11, wherein said slit spaces between said comb teeth of each of said comb teeth structure and said another comb teeth structure are arranged at a pitch of 0.8 to 2.5 mm.